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ABSTRACT

This working paper analyzes higher education faculty characteristics in Mexico and the United States. The first section describes and compares Mexican and U.S. faculty characteristics and conditions, including total number of faculty, student-teacher ratios, full- versus part-time status, rank, tenure, average salaries, gender and ethnicity, and union membership. The second section discusses contemporary policy issues including faculty evaluation, workload, and productivity, curriculum reform, faculty involvement with the business community, faculty development, and implications that the North American Free Trade Agreement will have for faculty on both sides of the border. The paper concludes with some suggested areas for collaborative efforts of faculty in the two countries including increasing faculty exchanges which provide scheduling flexibility and possibly salary support. New models for faculty development and enrichment should also be established. Also recommended is increased use of technology to facilitate interaction between faculty in the two countries. The final area for collaboration is the development of mutually beneficial relations with the business community. Five tables of tables and two graphs are included. (Contains 29 references.) (JLS)

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Understanding the Differences

A Working Paper Series on Higher Education in the U.S. and Mexico

Working Paper #2

Higher Education Faculty in Mexico and the United States: Characteristics and Policy Issues

by
Cheryl D. Lovell
and
María Dolores Sánchez Soler

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Working Paper #2:

Higher Education Faculty in Mexico and the United States: Characteristics and Policy Issues

by Cheryl D. Lovell and María Dolores Sánchez Soler

"Understanding the Differences"
A Working Paper Series on Higher Education in the U.S. and Mexico

Western Interstate Commission for Higher Education
P.O. Drawer P
Boulder, Colorado 80301-9752 U.S.A.

Western Interstate Commission for Higher Education

The Western Interstate Commission for Higher Education (WICHE) is a public, interstate agency established to promote and to facilitate resource sharing, collaboration, and cooperative planning among the western states and their colleges and universities. Member and affiliate states include Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

WICHE's broad objectives are to:

- Strengthen educational opportunities for students through expanded access to programs,
- Assist policymakers in dealing with higher education and human resource issues through research and analysis,
- Foster cooperative planning, especially that which targets the sharing of resources.

In 1993, WICHE, working in partnership with the Mexican Association for International Education (AMPEI) developed a binational project to facilitate educational interchange and the sharing of resources across the western region of the U.S. and with Mexico. This publication was developed as a resource for the project and as part of a series entitled "Understanding the Differences," created under the direction of WICHE's Special Projects and Research and Policy Analysis Units.

Funding for the working paper series was provided by The Ford Foundation. Other publications in the series include:

- Working Paper #1: *Policy Approaches to Evaluation and Incentive Funding in the U.S. and Mexican Higher Education* (Publication Number 2A261)
- Working Paper #3: *The Educational Systems of Mexico and the United States: Prospects for Reform and Collaboration* (Publication Number 2A263)
- Working Paper #4: *Higher Education's Responsiveness in Mexico and the United States to a New Economy and the Impacts of NAFTA* (Publication Number 2A264)
- Main comparative essay: *Understanding the Differences: An Essay on Higher Education in Mexico and the United States*—forthcoming, 1995. (Publication Number 2A265).

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Preface

A major obstacle to binational educational interchange across the U.S.-Mexican border is that educational policymakers and practitioners lack familiarity with the structures and issues of each other's educational systems. There are often assumptions on both sides that the two systems function similarly. To date, only limited information exists on educational policy issues affecting the United States and Mexico, particularly in a comparative context.

In an effort to fill that void, and with the encouragement of The Ford Foundation Director for Education and Culture, Alison Bernstein, and the Foundation's support, WICHE has developed a series of five reports, entitled *Understanding the Differences*. The series analyzes the major policy issues and differences in each country, so that meaningful discussions among higher education leaders and policymakers may occur toward the goal of developing new binational initiatives.

WICHE's *Understanding the Differences* series includes:

- Working Paper #1: *Policy Approaches to Evaluation and Incentive Funding in U.S. and Mexican Higher Education*, by Peter Ewell and Rollin Kent. This paper explores the growing desire shared by the two nations to obtain a significant "return on investment" in postsecondary education. The authors establish a context for comparison within Mexico and the United States and discuss the challenges and central policy dilemmas that each country faces as it attempts to implement the policy tools of evaluation and incentive funding. Past experiences and future directions for accountability and categorical funding mechanisms are explored.

- Working Paper #2: *Higher Education Faculty in Mexico and the United States: Characteristics and Policy Issues*, by Cheryl Lovell and Dolores Sánchez Soler. This paper describes and compares Mexican and U.S. faculty characteristics and conditions, including total number of faculty, student-teacher ratios, full- versus part-time status, rank, tenure, average salaries, gender and ethnicity, and union membership. Several contemporary policy issues are explored including faculty evaluation, workload and productivity, curriculum reform, faculty involvement with the business community, faculty development, and implications that NAFTA will have for faculty on both sides of the border. The paper concludes with some suggested areas for collaborative efforts of faculty in the two countries.

- Working Paper #3: *The Educational Systems of Mexico and the United States: Prospects for Reform and Collaboration*, by JoAnn Canales, Leticia Calzada Gómez and Néllyda Villanueva. This paper describes the sequential processes of education (from basic to higher education) in Mexico and the U.S. as a basis for understanding the relationships between the various levels of education. It analyzes the fragmented nature of the educational systems common to both countries and outlines possible solutions for integrating the different systems. Also included are brief overviews and examples of national, state and local collaborative relationships. The paper concludes with a discussion of ways to nurture and enhance binational collaborative relationships.

- Working Paper #4: *Higher Education's Responsiveness in Mexico and the United States to a New Economy and the Impacts of NAFTA*, by Elizabeth Santillanez. This paper discusses the critical role that higher education must play as the U.S., Mexican and Canadian markets become more integrated since the implementation of NAFTA. The paper gives an overview of

recent transformation of economic developments and business needs which require that higher education better prepare students to compete in the global workforce. It describes initiatives currently underway and gives recommendations for higher education policymakers to consider as they develop a workforce which is competitive and culturally-aware.

- The final comparative report: *Understanding the Differences: An Essay on Higher Education in Mexico and the United States*, by Judith I. Gill and Lilian Alvarez de Testa (forthcoming). The goal of this comparative report on higher education in Mexico and the United States is to provide an understanding of the major issues and differences in each country so that meaningful discussions may occur towards the development of new binational programs. While fully acknowledging the distinct contexts particular to each country, the report analyzes shared factors which contribute to the need for reform and change, including a perceived decline in educational quality; increasing enrollment demands; increased social, economic and cultural diversity within the workforce; rapid advances in technology; and increased and global economic competition.

WICHE hopes that this series will foster improved understanding of significant higher education issues in both countries and, over time, lead to new cooperative efforts to increase education opportunities in both nations.

WICHE thanks Alison Bernstein and Norm Collins of The Ford Foundation for their generous support of the general WICHE/AMPEI binational project, and for their recognition of the importance of United States-Mexico policy studies. We are also indebted to Judith I. Gill, former Program Director of WICHE's Research and Policy Analysis Unit, now serving as Associate Vice Chancellor for the Massachusetts Higher Education Coordinating Council. Gill identified the pertinent issues in binational education across our shared border, directed the research component of the project, and molded the information into a highly useful comparative context. Thanks also go to Sylvia Ortega Salazar, president of AMPEI, and Lilian Alvarez de Testa of UNAM who offered important insights in reviewing the papers.

WICHE acknowledges the binational teams of authors: Peter Ewell and Rollin Kent; Cheryl Lovell and Dolores Sánchez Soler; JoAnn Canales, Leticia Calzada Gómez and Néllyda Villanueva; and, Elizabeth Santillanez and her advisor, Paul Ganster. The authors eagerly worked through language barriers, cultural differences and logistical obstacles, in the spirit of true cross-border cooperation and exchange, which should characterize a project of this nature. We hope their cooperative efforts will inspire other researchers to pursue future binational collaborations.

Paula Palmer provided valuable editorial assistance as the papers were developed. Thanks also to WICHE staff members Robin Zúñiga (review of statistics); Debby Jang and Cherie Pederson (graphics support); Kelly Zweifel (library research); and Mary Ellen Keller (production). And finally, WICHE acknowledges Jere Mock for managing the project and her assistance in editing the series, and Margo Schultz for her many contributions including coordinating the communications with the authors and layout of the final manuscripts.

Richard W. Jonsen
Executive Director

Western Interstate Commission for Higher Education
Boulder, Colorado (USA)
April 1995

List of Abbreviations

ACE	American Council on Education	Consejo Estadounidense para la Educación Superior
AFT	American Federation of Teachers	Federación Estadounidense de Profesores
ANUIES	National Association of Universities and Institutions of Higher Education	Asociación Nacional de Universidades e Instituciones de Educación Superior
AMPEI	Mexican Association for International Education	Asociación Mexicana para la Educación Internacional
CQAIE	Center for Quality Assurance in International Education	Centro para la Evaluación de la Calidad de la Educación Internacional
APEC	Asia Pacific Economic Cooperation	Organización para la Cooperación Económica del Asia-Pacifico
AAUP	American Association of University Professors	Asociación Estadounidense de Profesores Universitarias
CAPFCE	Federal Administrative Committee for the Construction of Schools	Comité Administrativo Federal para la Construcción de Escuelas
CETE	Educational Television Training Center	Centro de Entrenamiento en el uso de la Televisión Educativa
CIIES	Interinstitutional Committees for the Evaluation of Higher Education	Comites Interinstitucionales para la Evaluación de la Educación Superior
CINVESTAV	Center for Research and Advanced Studies	Centro de Investigación y Estudios Avanzados
COEPES	State Coordinating Committee for Higher Education Planning	Coordinación Estatal para la Planeación de la Educación Superior
CONACYT	National Council for Science and Technology	Consejo Nacional de Ciencia y Tecnología
CONALEP	National College of Professional Technical Education	Colegio Nacional de Educación Profesional Técnica
CONAEVA	National Commission for the Evaluation of Higher Education	Comisión Nacional para la Evaluación de la Educación Superior
CONPES	Mexican National Coordinating Board for Higher Education Planning	Consejo Nacional para la Planeación de la Educación Superior
CORPES	Regional Coordinating Council for Higher Education Planning	Coordinación Regional para la Planeación de la Educación Superior
COSNET	Council for the National Sytem of Education Technology	Consejo del Sistema Nacional de Educación Tecnológica
CUPIA	Council of Public Universities and Similar Institutions	Consejo de Universidades Públicas e Instituciones Afines

ECS	Education Commission of the States	Comisión Educativa de los Estados
FIPSE	Funds for the Improvement of Postsecondary Education—U.S. Department of Education	Fondo para el Mejoramiento de la Educación Media Superior y Superior — Departamento de Educación de los Estados Unidos
FLACSO	Latin American School of Social Sciences	Facultad Latinoamericana de Ciencias Sociales
FOMES	Fund for Higher Education Modernization	Fondo para la Modernización de la Educación Superior
GATT	General Agreement on Tariffs and Trade	Acuerdo General de Aranceles y Comercio
ICED	International Council for Educational Development	Consejo Internacional para el Desarrollo Educativo
IIE	Institute of International Education	Instituto para la Educación Internacional
IRSC	Institute for Regional Studies of the Californias	Instituto de Estudios Regionales de las Californias
ITESM	Monterrey Institute of Technology	Instituto Tecnológico y de Estudios Superiores de Monterrey
NAFSA	Association of International Educators	Asociación de Educadores Internacionales
NAFTA	North American Free Trade Agreement	Tratado de Libre Comercio de Norteamerica (TLC)
NCHEMS	National Center for Higher Education Management Systems	Centro Nacional de Sistemas Administrativos para la Educación Superior
NEA	National Education Association	Asociación Nacional de Educación
NSF	National Science Foundation	Fundación Nacional para la Ciencia
OECD	Organization for Economic Cooperation and Development	Organización para la Cooperación Económica y el Desarrollo
PROFMEX	Consortium for Research on Mexico	Consorcio para Investigación sobre México
PROIDES	Integral Program for the Development of Higher Education	Programa Integral para el Desarrollo de la Educación Superior
SEIS-ITESM	Satellite Interactive Education System-ITESM	Sistema Satelital de Educación Interactiva
SEP	Mexican Ministry of Education	Secretaría de Educación Pública
SESIC	Undersecretaryship of Higher Education and Scientific Research	Subsecretaría de Educación Superior e Investigación Científica
SHEEO	State Higher Education Executive Officers	Ejecutivos Estatales de Educación Superior

SINAPPES	National System for Long-term Planning in Higher Education	Sistema Nacional para la Planeación Permanente de la Educación Superior
SNI	National System of Researchers	Sistema Nacional de Investigadores
SNTE	Mexican National Teachers' Union	Sindicato Nacional de Trabajadores de la Educación
SPRE	State Postsecondary Review Entities	Comisiones Estatales de Evaluación de Instituciones de Educación Media Superior y Superior
SUPERA	National Program for the Advancement of Academic Personnel	Programa Nacional de Superación del Personal Académico
UABC	Autonomous University of Baja California	Universidad Autónoma de Baja California
UAM	Autonomous Metropolitan University	Universidad Autónoma Metropolitana
UANL	Autonomous University of Nuevo Leon	Universidad Autónoma de Nuevo León
UNAM	National Autonomous University of Mexico	Universidad Nacional Autónoma de México
USDE (DOE)	United States Department of Education	Departamento de Educación de los Estados Unidos
USIA	United States Information Agency	Agencia de Información de los Estados Unidos
WCET	Western Cooperative for Educational Telecommunications (at WICHE)	Cooperativa Occidental para la Telecomunicación Educativa
WICHE	Western Interstate Commission for Higher Education	Comisión Interestatal Occidental para la Educación Superior

Introduction

This working paper analyzes higher education faculty characteristics in Mexico and the United States, to the extent that available data permit comparisons between the two countries. It also presents an overview of current and related faculty policy issues in both countries.

The first section of the paper describes and compares faculty characteristics and conditions, including total number of faculty, student-teacher ratios, full- vs. part-time status, rank, tenure, average salaries, gender and ethnicity, and union membership. In the second section, contemporary policy issues concerning faculty in the two countries are discussed. These include faculty evaluation, workload and productivity, curriculum reform, involvement with the business community, faculty development, and the potential implications for faculty of the North American Free Trade Agreement. The conclusion offers some suggested areas for collaborative efforts of faculty in the two countries.

FACULTY CHARACTERISTICS

The following comparison of various faculty characteristics between countries is somewhat limited by incompatibility of data due to differences in data collection efforts and definitions of core data elements in the two countries. Further, there are inconsistencies in data on faculty within Mexico and the United States as well as between the two countries.[1] Of necessity, the paper relies on interpretive analysis, which, despite its limitations, permits a comparison of faculty characteristics in two very different environments.

Total number of faculty

In total numbers, faculty in the United States outnumber faculty in Mexico eight to one. The total number of faculty in the U.S. was reported to be 885,796 for the fall of 1992 (Zimbler, 1994). This figure includes faculty from all types of institutions in both public and private sectors. In Mexico, 167,520 faculty members were reported for 1992-93 (SEP/ANUIES, 1993). Of these total numbers, the majority in both countries are employed by public colleges and universities—about 61 percent in the U.S. and about 76 percent in Mexico. Mexico reports data for graduate faculty which indicate that 82 percent of the graduate faculty are employed in public institutions. Data disaggregated at that level are not available in the U.S.

Table 1 presents the breakdown of faculty by institutional type in Mexico. Table 2 presents the corresponding data for the U.S.

[1] In the U.S., a national report will be published in 1995 (Jones and Lovell, in press) which offers uniform definitions and standard analytical approaches that will facilitate a more consistent and comprehensive view of U.S. faculty.

Table 1

Number and Percent of Mexican Faculty by Institutional Type and Educational Level

Type of Institution	Teachers' Education[1]		Undergraduate Level[2]		Graduate Level[3]		TOTALS	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public	9,192	75.4%	88,649	75.4%	7,348	82%	105,189	76%
Private	2,996	24.6%	28,871	24.6 %	1,609	18%	33,476	24%
TOTAL	12,188	100%	117,520	100%	8,957	100%	138,665	100%

[1] Teachers' education—These institutions are responsible for all teacher preparation programs. These institutions offer both undergraduate and graduate degrees exclusively in education.

[2] These institutions represent all undergraduate programs except education.

[3] These institutions represent all graduate programs except education.

SOURCE: SEP-ANUIES (1993), Datos Básicos de la Educación Superior, México.

Table 2

Percentage Distribution of U.S. Faculty by Institutional Type and Control

Type of Institution	Public		Private		TOTALS	
	Number	Percentage	Number	Percentage	Number	Percentage
All Institutions[1]	617,381	70%	224,919	25%	885,796	100%
Research	148,027	73%	55,755	27%	203,782	100%
Doctoral[2]	77,721	64%	44,124	36%	121,845	100%
Comprehensive	137,922	68%	64,966	32%	202,888	100%
Private (Liberal Arts)	--	--	60,074	--	60,074	--
Public 2-Year	253,711	--	--	--	253,711	--
Other[3]	--	--	--	--	43,495	--

[1] All accredited, nonproprietary U.S. postsecondary institutions that grant a 2-year (A.A.) or higher degree and whose accreditation at the higher education level is recognized by the U.S. Department of Education.

[2] All institutions classified by the Carnegie Foundation, including specialized medical schools.

[3] Public liberal arts, private 2-year, and religious and other specialized institutions, except medical.

NOTE: May not add to total because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, "1993 National Study of Postsecondary Faculty."

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Student enrollment and student-faculty ratios

In both countries, student enrollment has been increasing since 1970, and the majority of students attend public institutions. Mexico's student enrollment in higher education increased dramatically between 1970 and 1990, by approximately 400 percent (SEP/ANUIES, 1993). This represents an increase from 212,000 to more than 1 million students, most of whom are enrolled in public institutions. During this period of enormous growth, the ratio of students to teachers increased, but not greatly, from 7.6:1 in the early 1960s to an average of 10.6:1 in the 1980s and 1990s (Lorey, 1993).

There is considerable variation in student-faculty ratios at Mexican institutions, depending on their type (private vs. public), their educational levels, and whether all faculty or only full-time faculty are counted. Table 3 shows that when part-time and hourly faculty are counted, public and private institutions have relatively low student-faculty ratios, ranging between 5 and 10 students per faculty member at different types of institutions. As Table 4 shows, in both private and public universities the student-faculty ratios are much higher when only full-time faculty are counted, and at private institutions the ratios are higher than at public institutions.

Table 3

Students per all faculty (S/AF) in Mexico by institutional type and educational level

Institutional Type	Teacher Education			Undergraduate Level			Graduate Level		
	Number of Faculty	Percent-age	S/AF Ratio	Number of Faculty	Percent -age	S/AF Ratio	Number of Faculty	Percent-age	S/AF Ratio
Public	9,192	75.4%	8:1	88,649	75.4%	10:1	7,348	82%	5:1
Private	2,996	24.6%	9:1	28,871	24.6%	8:1	1,609	18%	7:1
TOTAL	12,188	100%	--	117,520	100%	--	8,957	100%	--

Table 4

Students per full-time faculty (S/FTF) in Mexico
by institutional type and educational level

Institutional Type	Teacher Education			Undergraduate Level			Graduate Level		
	Number of Faculty	Percent-age	S/FTF Ratio	Number of Faculty	Percent -age	S/FTF Ratio	Number of Faculty	Percent-age	S/FTF Ratio
Public	2,049	88%	39:1	27,434	89%	33:1	3,601	84.4%	11:1
Private	279	12%	107:1	3,389	10.9%	69:1	667	15.6%	18:1
TOTAL	2,328	100%	--	30,823	100%	--	4,268	100%	--

SOURCES: SEP-ANUIES (1993). Datos Básicos de la Educación Superior, México.
ANUIES (1992). Anuarios Estadísticos: Licenciatura en Universidades e Institutos Tecnológicos, Posgrado, Licenciatura en Normales, México.

In the United States, the greatest student enrollment growth occurred between 1957 and 1967, with an increase of 108 percent (U.S. Department of Education, 1993). In the next decade, an increase of 63 percent was recorded; then, between 1977 and 1987 the rate of increase dropped to 13 percent. By 1992, student enrollment nationwide had reached 14.6 million. Of these students, almost 80 percent attend public, as opposed to private, institutions; in the western (WICHE) region, the rate is higher at 90.5 percent.

The average student-faculty ratio across the U.S. is 13:1 (U.S. Department of Education, 1993); at two-year institutions, this average is lower, at 10 students per faculty member (Digest of Education Statistics, 1993).

Full-time/part-time status

One of the major differences between faculty in the U.S. and Mexico is their status as full- or part-time employees. Mexican universities rely heavily on part-time faculty, most of whom are paid by the hour for classroom teaching, while at most colleges and universities in the U.S., the majority of faculty are full-time.

In the U.S., about two-thirds of the faculty are full-time (U.S. Department of Education, 1993). As with any national average, this statement masks differences among different types of institutions. For example, community colleges employ the greatest overall number and percentage of part-time faculty. According to Gappa and Leslie (1993), as many as 60 percent of faculty in some community colleges are

part-time. In contrast, at research institutions only about 13 percent of faculty work part-time.

In Mexico, a quarter of the faculty are employed full-time (SEP/ANUIES, 1993). This represents a considerable increase from 7 percent in 1968 (Lorey, 1993). Most Mexican faculty (66.6 percent) are hired to teach on a temporary, per-class basis; they are usually paid an hourly rate for classroom teaching. A few faculty (8.3 percent) are salaried on a part-time basis (Lorey, 1992).

Rank

In both Mexico and the United States, faculty are ranked at the time of hire and also may be promoted to higher ranks according to specified criteria and procedures. In both systems there are also unranked faculty; their numbers are relatively few in the U.S., but in Mexico they include almost all faculty paid by the hour—about two-thirds of the total.

Academic degrees obtained is an important criterion for determining rank in both countries, but there are significant differences in levels of academic experience attained by a majority of faculty. In the U.S., more than half (55 percent) have earned doctorate degrees (U.S. Department of Education, 1993), whereas in Mexico about 3 percent hold the doctorate degree (SEP/ANUIES, 1993). In the U.S., those faculty without a doctorate tend to have a master's degree and are most often employed in public two-year institutions.

In Mexican public institutions, a majority of faculty (62 percent) holds bachelor's degrees (SEP/ANUIES, 1993). This situation developed in the 1970s when Mexican institutions responded to burgeoning enrollments by hiring recent graduates to teach incoming students. The following decade of economic crisis offered few opportunities for academic advancement for these young instructors. In the 1990s, institutions and the federal government are committing resources to faculty development in an effort to increase the number of faculty with advanced degrees (see Faculty Development, below).

In Mexico there are three ranks for full- and half-time faculty; these are (in ascending order) *Asistente, Asociado* and *Titular*. Within each of these ranks there are three levels, A, B, and C, giving a total of nine different levels. Mexican faculty paid by the hour can be ranked, but they usually have one to three ranks without level. Rank is assigned at the time of hiring by one of two procedures. When a faculty member is granted tenure at the time of hiring as a result of a *concurso de*

oposición, the evaluation is completed by an academic commission (peer review). When the faculty member is hired without tenure, his/her credentials are usually evaluated by an administrator, typically from the personnel department.

Autonomous universities in Mexico have their own bylaws, in which requirements for each rank and level are stated. The technological institutes also establish their own requirements, although their affiliation with the federal government's Secretariat for Public Education (SEP) prevents them from writing their own bylaws. In general, the requirement for *Asistente* is a bachelor's degree in a specified field of knowledge; in many cases no previous experience is required. For *Asociado*, the minimum requirements include the bachelor's degree, some experience in teaching or as an assistant to a researcher, and in some cases papers presented at conferences or seminars and/or articles published. For level C there is normally a requirement for a master's degree. For a *Titular*, a master's degree is almost always required and in many cases a doctorate degree (especially for level C), as well as a specified number of years of experience in research or teaching, and papers and articles presented and published. In some cases, professional experience in the private sector is considered in determining rank.

In the U.S., faculty are typically classified into the ranks of Full Professor, Associate Professor, Assistant Professor, Instructor and Lecturer. Within these classifications, about 23 percent are Full Professors, 18 percent Associate Professors, 18 percent Assistant Professors, 29 percent Instructors and approximately 5 percent Lecturers (U.S. Department of Education, in press).

Typically in the United States, entry-level Assistant Professors do not have extensive teaching experience. In the Associate Professor rank, three to five years of teaching experience and several publications are commonly expected. For the Full Professor rank, a demonstrable teaching and research record is generally required. These expectations for the different ranks vary greatly, according to the types of institution. For example, at a comprehensive college, a Full Professor may have an exceptional teaching history with little or no research record. On the other hand, at a research institution, faculty at the Assistant Professor rank will be expected to have a research record prior to hiring.

Tenure status

Academic tenure in both Mexico and the United States confers on faculty members a status of permanent contract. In Mexico, a recent survey shows that 70 percent of faculty members who are employed exclusively in higher education have obtained tenure; among part-time faculty whose primary employment is off-campus, 51.6 percent have tenure (Gil, et al., 1994). The same survey indicates that 29 percent of Mexican faculty are employed exclusively in higher education.

In the U.S., 64 percent of full-time faculty are tenured (U.S. Department of Education, 1993). There is a significant gap between the percentage of males who have obtained tenure (70 percent) and females (49 percent). Comparable data by gender are not available for Mexico.

In Mexico, academic tenure assures a position until retirement for age or disability, and in most cases gives access to such benefits as sabbatical leave. Tenured faculty are, however, subject to dismissal for academic nonfulfillment or for other causes as stipulated in the contract or institutional by-laws. Tenure is granted as a result of an evaluation process completed by an academic commission. In public universities, the commission is composed of faculty elected by each department or school and representatives of the department of academic affairs and/or the secretary general of the university. The commission reviews applicants' academic credentials and may require interviews, submission of research projects on topics selected by the commission, course syllabi, written examinations, and a lecture. At public technological institutes, full-time professors acquire tenure as a result of a series of entrance evaluation procedures in which an academic commission grants or denies approval.

As in Mexico, tenure in the U.S. assures a position until departure for reasons of retirement, voluntary resignation or nonperformance. Procedures for obtaining tenure almost always involve an intensive review of the faculty member's credentials, including a review of research, service and student evaluations of teaching. In many institutions the faculty member must first receive support by a vote of the tenured faculty in his/her academic department. Next, the faculty member's credentials are sent to a college-wide committee for review. The recommendation of this committee is usually sent to an institution-wide tenure review committee. This committee makes a recommendation to the academic vice president/provost, who makes a recommendation to the president of the institution. In most cases, the Board of Trustees or the Board of Regents makes the final approval of tenure.

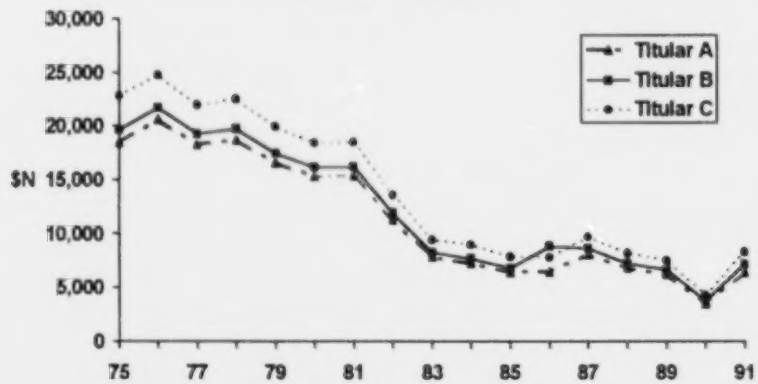
In a recent study, the Carnegie Foundation for the Advancement of Teaching (1994) found that among U.S. faculty, 75 percent believe it is difficult to achieve tenure without publishing, while in Mexico only 28 percent of faculty consider publishing critical to achieving tenure. Current government incentives to expand academic research activities in Mexico may soon result in more attention to research in tenure deliberations (see Workload/Productivity, below).

Average salaries

There is a great disparity between faculty salaries in Mexico and the United States. While U.S. salaries have been steadily increasing in the last decade, outpacing average increases in the cost of living (see Graph 2), faculty salaries and their purchasing power in Mexico have been declining for two decades (Graph 1).

In 1991, an *Asociado C* (rank six out of nine) earned an average annual salary of $8,827. García (1990) calculates that professors at the level of *Asociado A* (rank four out of nine) lost approximately 75 percent of their purchasing power between 1976 and 1990.

Graph 1
Annual Faculty Salaries in Mexico by Titular Rank in Constant Nuevo Pesos ($N) (Base Year 1978)



SOURCE: *ANUIES Report on Faculty Salaries*, 1993, unpublished paper.
Real salaries were obtained with 1978 as a base year; the formula for deflation was as follows:
SALARIES AT CURRENT PRICES ÷ (SALARIES/INPC 1978 BASE)100
WHERE INPC is the consumer price index reported for December of each year by Banco de Mexico.

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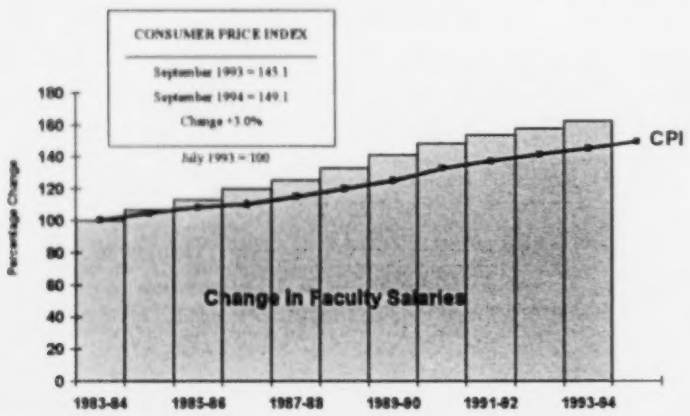
Graph 2
Percentage Change in U.S. Faculty Salaries as Compared to the Cost of Living 1983-84 to 1993-94



SOURCES: American Association of University Professors; U.S. Department of Labor, 1994

Data on average faculty salaries in the U.S. for 1993-94 indicate an overall average for all institutions at $47,780 for a full-time, nine-month contract. The salaries range from an average of $68,700 at doctoral granting institutions to $39,240 at two-year institutions with academically ranked faculty.

In both countries there are significant differences between faculty salaries at private as opposed to public institutions. In the U.S., the average salary at a public doctoral granting institution is $64,860, compared to $82,520 at a private doctoral granting institution (American Association of University Professors, 1993-94). In Mexico, public institutions continually lose highly qualified faculty to private universities where salaries are higher. The rector of one public university considers this "internal brain drain" more harmful to Mexican public universities than the loss of scholars to the U.S. or Europe (Lorey, 1993). To forestall such losses, the National Researchers System has been supplementing salaries of advanced scholars in public institutions on a competitive basis since 1984 (see Workload/Productivity, below).

Special Note on Gender and Ethnicity

In the United States, data for each of the above areas is disaggregated by gender and ethnicity. For example, 71 percent of male faculty are full-time, whereas only 60 percent of female professors are full-time. The ethnic composition of the U.S. faculty is overwhelmingly white (87 percent). Among full-time faculty members only 5 percent are members of ethnic minority groups which account for 24.4 percent of the population as a whole. While 9 percent of the general U.S. population is Hispanic, only approximately 3 percent of U.S. faculty are Hispanic (U.S. Bureau of the Census, 1990).

Data on ethnicity of faculty are not available in Mexico, where most people are considered *mestizos*, that is, of mixed ethnicity. Although disaggregation of data by gender is not common in Mexico, in a recent survey of a sample of Mexican faculty, 68 percent of faculty respondents indicated that they were male and 31 percent female (Gil, et al. 1994). This reflects the society as a whole, where males outnumber females in the workforce. Women approach equal representation among faculty who work exclusively in higher education (42 percent), but among faculty whose primary jobs are off-campus, 77 percent are men (Gil, et al. 1994). Typically, more male than female faculty have the opportunity or the interest to hold jobs in the productive sector and government, which tend to be better compensated than jobs in academia.

Faculty unions

In both Mexico and the United States, unions play a stronger role in elementary and secondary education than in higher education. In Mexico, union membership among university faculty is much higher than in the U.S., at about two-thirds compared to 21 percent. In both countries, unions tend to deal mainly with workplace issues such as salaries, benefits and working conditions.

Union membership in Mexico is voluntary, and each public university has its own faculty union. Unions engage regularly in collective bargaining to negotiate general faculty contracts. Their role in such academic concerns as curriculum reform has diminished in the last decade, reflecting an overall decline in the influence of unions in Mexican society during this period.

In the United States, faculty unions are most active in California and the Northeast and Midwest regions. The National Education Association (NEA) and the American Federation of Teachers (AFT) have the largest memberships, with 85,000 and 100,000, respectively (Cage, 1994). Discussions are underway to merge the two unions in order to increase bargaining power. The American Association of University Professors (AAUP) acts as the bargaining agent for about 20,000 faculty members. When U.S. faculty unions strike, it is typically regarding salary matters ranging from anticipated salary increases to changes in the benefit structures. On occasion, administrative actions may give rise to a strike by the faculty (e.g., a critical decision made by administrators with no opportunity for input from the faculty).

FACULTY ISSUES

In spite of the many differences in faculty characteristics outlined above, faculty members in Mexico and the United States are concerned with similar issues that affect their careers, their institutions and the quality of education in their countries. The issues outlined below represent important areas of discussion and policy development in both countries. They include faculty evaluation, workload/productivity, curriculum, involvement with the business community, faculty development and the impacts of the North American Free Trade Agreement.

Faculty evaluation

In addition to the evaluation procedures used to establish rank and grant tenure in each country (described above), merit increases in salary are awarded according to various evaluation criteria. In Mexico, the federal government recently initiated merit increases at all public institutions, whereas in the U.S. there is no universal system and no federal funding is available specifically for this purpose.

In 1991, the Mexican government added 30 percent to the existing payroll budgets of all public institutions for merit increases. This strategy addressed two problems in the Mexican higher education system: the need to increase faculty salaries, and the need to raise the quality of instruction and research. Faculty at public institutions now enter into *concursos* on an annual or biannual basis, in which they compete for the merit increases. They are evaluated according to the quality, relevance and productivity of their efforts in teaching, research and

community service. Students' and deans' evaluations of their performance may be included. They also present published papers, conference presentations and other records that document their professional activities. All these documents are reviewed by an academic peer review commission. Eligibility and procedures for merit increases depend on the contract status of the faculty member (full-time/part-time, permanent/temporary, etc.).

This new faculty incentive system has had deep repercussions in the cultures of institutions of higher education. It has created a favorable climate for evaluation, honored and rewarded Mexico's outstanding academicians, and changed faculty attitudes toward their jobs. Increasingly, faculty ask for more diversified workloads, including time to work on research and publications as well as teaching.

In the U.S., faculty members' evaluations typically include the three primary aspects of the job: teaching, research and service. Teaching is most often reviewed according to multiple criteria; research may be reviewed simply by dollars generated through grant proposals or number of publications, as opposed to a substantive review; service is rarely, if ever, reviewed. There is now some interest in the U.S. in evaluating faculty members' contributions toward achieving or supporting the institutional mission as a criterion for determining faculty effectiveness (Layzell, Lovell and Gill, 1994). This approach would reward faculty whose efforts support the overall goals of the institution as opposed to their individual research interests, bringing faculty evaluation more in line with the expectations of consumers and public policy makers.

Workload/productivity

External pressures are being brought to bear on faculties of both countries to make changes in how they spend their time (workload) and to demonstrate results of their efforts (productivity) (Jones and Lovell, in press). The sources of these pressures are different in the two countries, however, and they are pushing faculty in different directions.

In the United States, the pressure is being exerted on public institutions by state legislatures, and the demand is for faculty to dedicate more time to teaching and interacting with undergraduate students. Unwilling to continue to pay the bill for higher education without some form of accountability, many states now monitor how faculty spend their time and how they are compensated and rewarded

(Russell, 1992). States are sending a signal to higher education that "doing more with less" will be the expectation and that it will be the institutions' responsibility to "prove" that they are succeeding in these terms.

The amount of time U.S. faculty spend with students (teaching, preparing for teaching, advising and counseling students) varies greatly by type of institution. Teachers at two-year colleges spend a much larger portion of their time teaching than do faculty at research universities. A recent survey shows that on the average, faculty in the U.S. report that they work about 55 hours per week (The American College Teacher, 1991). As shown in Table 5, most faculty report that they spend between 5 and 16 hours per week teaching, an additional 5 to 16 hours preparing for teaching, and one to eight hours per week advising or counseling students. This represents a range of between 20 and 78 percent of faculty time spent on activities directly related to teaching. A majority (63 percent) of U.S. faculty, including faculty at two-year institutions, reports that their primary interest is teaching.

Table 5

Faculty Workloads, 1989-90

	Proportion reporting number of hours per week								
	0	**1-4**	**5-8**	**9-12**	**13-16**	**17-20**	**21-34**	**35-44**	**45+**
Teaching	0.3%	7.2%	26.2%	32.0%	17.6%	10.1%	5.9%	0.5%	0.1%
Preparing for teaching	0.3	8.4	22.9	25.2	17.3	13.8	9.4	2	0.7
Research and scholarly writing	20.2	27.9	16.4	12.4	7.3	6.7	6.3	1.8	1.0
Advising or counseling students	2.6	56.6	29.5	8.0	2.0	0.9	0.4	0.1	0.0
Committee work/meetings	4.6	68.8	20.6	4.3	1.1	0.3	0.1	0.0	0.0
Other administration	36.5	38.6	11.5	5.8	3	2.3	1.7	0.4	0.2
Consulation with clients or patients	68.8	20.7	6.3	2.2	0.8	0.6	0.4	0.1	0.1

Note: The figures are based on survey responses of 35,478 faculty members at 392 colleges and universities. The survey was conducted in the fall and winter of 1989-90 and was limited to full-time professors who spent at least part of their time teaching undergraduates. The response rate was 55 percent. The figures were statistically adjusted to represent the total population of full-time faculty members. Because of rounding, figures may not add to 100 percent.

SOURCE: "The American College Teacher: National Norms for the 1989-90 H.E.R.I. Faculty Survey." Published by University of California at Los Angeles Higher Education Research Institute.

Paradoxically, while states are pushing U.S. faculty to dedicate more time to teaching and interacting with students, financial compensation in higher education still favors research over teaching. There is an inverse relationship between teaching and salaries: the more time a faculty member spends on teaching, the lower the salary, and, conversely, the more time a faculty member spends doing research the higher the salary (Fairweather, 1993). Until the reward system is better aligned with public expectations about faculty workload, faculty will be caught in a bind—penalized in the pocketbook for doing what the public wants them to do.

In Mexico quite a different situation is unfolding. It is the federal government that is exerting pressure, and the demand is for more research activity among the faculty. Since 1984, the National Council for Science and Technology (CONACYT) has funded a National Researcher System through which selected scholars receive monthly stipends to recognize and reward their research activities (Pallán et al., 1994). In 1994, CONACYT sponsored 5,879 researchers, who received monthly stipends ranging between 1,392 and 6,870 pesos, in addition to their salaries. This competitive grant process sends a message to Mexican faculty that research will be rewarded.

Gil and colleagues (1994) find that there is now a perceived tendency for Mexican faculty to increase their research activities and hours devoted to research. When asked their preferences, 43 percent of surveyed faculty responded that they would like to work mainly in research and partly in teaching. The same study finds that among faculty who work exclusively in higher education, 23 percent currently dedicate all of their time to teaching and related activities; 23 percent divide all their time between teaching and research; 17 percent to teaching and other activities; and 28 percent to teaching, research and other activities. There is a clear trend toward a more diversified workload for Mexican faculty, and, faculty are economically rewarded for following the policy directions of the government.

Curriculum issues

Faculty in both Mexico and the United States are engaged in efforts to modernize the curriculum, improve instructional methods and increase flexibility in the structure of higher education to meet the needs of students and society. While in Mexico the stimulus for change comes primarily from within the higher education establishment, in the U.S. fiscal and political pressure from state governments is driving the reform movement. Efforts are underway on both sides

of the border to use computer technology to modernize libraries, classrooms and other learning environments, to expand educational opportunities through distance learning programs, and to involve the private sector in enhancing instructional capabilities.

Faculty in Mexico have undertaken an extensive curriculum reform effort, through which almost 60 percent of curriculum was updated between 1991 and 1993, according to former Undersecretary of Higher Education, Antonio Gago Huguet (U2000 Crónica de la Educación Superior, 1993). An important element of this reform effort is to increase opportunities for students to participate with faculty in research projects. Faculty are redesigning courses to include research opportunities and developing appropriate learning activities to stimulate independent learning. The goal is to develop a community of independent learners. This new emphasis is also broadening the role of faculty beyond classroom teaching.

The initiative for curriculum reform in Mexico has come primarily from within the higher education system. The National Association of Universities and Institutions of Higher Education (ANUIES), which represents both public and private institutions of higher education, has been promoting curriculum reform since the early 1980s. Together, ANUIES, the public autonomous universities and the Secretariat of Public Education developed a set of proposals for curriculum reform. Channeled through the National Coordinating Board for Higher Education Planning (CONPES), these proposals were included in the National Development Plan to promote changes in public higher education institutions, along with nine other policy guidelines for the modernization of higher education. The ten guidelines are: modernize the curriculum and improve the quality of professional training; improve the training of teachers; improve the training of researchers; revise the areas of education offered; define institutional roles in research and graduate studies; improve academic infrastructure; improve administration and governance; develop an institutional information system; diversify funding sources; and facilitate the participation of the productive and social sectors in higher education (ANUIES, 1994).

Changes in the Mexican economy resulting from the lowering of trade barriers are also stimulating universities to become more flexible to adapt to the changing economic environment. Fixed programs of compulsory courses are giving way to more options and choices for students in many disciplines.

As in the U.S., distance learning is being developed in Mexico as a cost-effective way to offer educational opportunities to more students. The need to develop curriculum for distance learning has been a major stimulus in the curriculum reform movement. The Universidad Nacional Autónoma de México (UNAM) began its Sistema de Universidad Abierta (an "Open University System") (SUA) in 1972 . SUA is an alternative higher education distance learning program which operates both regionally and nationally, in nine faculties and schools across receiver centers installed at other UNAM campuses located in the interior of Mexico. In the 1990-91 academic year, 2,887 students were enrolled, with 315 faculty members involved. The innovative program offers 17 bachelor's degrees, as well as master's degrees.

In addition to the pioneering distance learning program at UNAM (National Autonomous University of Mexico), two important examples are the Educational Television Training Center (CETE), a joint educational television program of Japan and Mexico for Latin America, and the Satellite Interactive Education System (SEIS) at one of Mexico's major private universities, the Monterrey Institute of Technology (ITESM). Through the Satellite Interactive Education System, professors and students at various sites have been interacting by computer and television since the program started in 1989. Master's degrees in administration, information systems administration, environmental engineering, computer sciences and industrial engineering are offered through the distance learning program.

In the United States, the stimulus for curriculum redesign is coming primarily from state legislatures in the form of accountability requirements. Legislators are asking institutions to demonstrate how efficiently and effectively they are using state-allocated resources. Attention is shifting from educational inputs (faculty workload) to outputs (productivity). Faculty are being asked to show the results of their efforts, i.e., what students have learned. Curriculum reform, therefore, is placing more emphasis on effective instructional methods, based on recent studies that recommend, for example, interactive learning environments and opportunities for students to teach other students.

As in Mexico, there is a great deal of interest in the U.S. in identifying ways that technology might be used to improve instruction and cut the costs of delivering higher education. EDUCOM, a consortium of public and private entities including some 600 colleges and universities and 122 corporations involved in computing, is working to demonstrate the effectiveness of technology as a learning tool (DeLoughry, 1994). EDUCOM's "National Learning Infrastructure Initiative" seeks to increase the use of computer labs and multimedia to enhance teaching. According to a study conducted by EDUCOM in 1994, 16 percent of college courses

in the U.S. currently make use of computer labs, and 4 percent use multimedia (Green, in press).

The Western Cooperative for Educational Telecommunications developed by the Western Interstate Commission for Higher Education (WICHE) is another example of a significant effort to address educational telecommunications and distance education in the United States. This regional cooperative is focused on policy and implementation issues that strengthen the efficiency, impact and quality of educational telecommunications systems and programs in the western region of the U.S. An especially useful effort of the Western Cooperative is finding ways to reduce state policy barriers to electronically delivered programs in higher education. The Western Cooperative's constituency (which includes over 150 universities, colleges, schools, public agencies from 18 states predominantly in the West, and private corporations from throughout the nation) is committed to the premise that cooperation and collaboration can benefit their individual interests.

Distance learning is being developed in the U.S. as well as in Mexico; it is strongly promoted by the State Higher Education Executive Officers (SHEEO), through its project, "Gaining State Commitment to a Redesigned Delivery System." A primary focus of this project is to identify technologies that might work to expand access to higher education at a significantly lower unit cost and higher quality. The incorporation of such technologies into the higher education system promises to expand common conceptions of "campus" and views of faculty work.

The examples from both countries are growing proof of the interest in redesigning and retooling the curriculum with particular emphasis on innovation and efficiency. It will be interesting to monitor progress as both countries implement technological innovations that have the potential to increase access to higher education.

Involvement with the business community

Faculty involvement with the business community occurs to some extent in both countries, and efforts are underway to strengthen these relationships for the mutual benefit of the higher education and business enterprises.

Unlike their U.S. counterparts, many Mexican faculty are part-time instructors who are also employed in local, state or national government and/or business. This direct contact provides opportunities for Mexican faculty to develop

collaborative working relationships with non-academic institutions and colleagues that are less available to full-time U.S faculty. Mexican faculty bring their first-hand knowledge of government and business into the classroom and into curriculum planning, where they may effectively tie educational preparation to the needs and realities of the business world.

Examples of collaboration between Mexican institutions and the business community include:

- an important center for technological innovation at the National Mexican Autonomous University (UNAM);
- a long-time collaboration between the school of engineering at the Autonomous University of Nuevo León (UANL) and the VITRO corporation in research activities related to masters and doctoral programs;
- the school of engineering at the Autonomous University of the Yucatan, where every undergraduate engineering student works in an industry and receives academic credit for the work.

Faculty involvement with the business community also is an important issue in the United States, but because the majority of faculty are employed full-time, the reason for involvement is different. As the cost of higher education has increased, the public and its elected representatives have demanded greater accountability in the use of public funds. Higher education is held accountable to demonstrate partnerships with business and industry and to shift the focus of curriculum and research from theory to applied or "real-world" needs. Examples of collaborative efforts include the establishment of research centers to study state and regional problems. In the WICHE region, examples include: the Morrison Institute for Public Policy at Arizona State University; the Utah Partnership for Educational and Economic Development; and, the University of Wyoming's Public Utility Research and Training Institute (WICHE, 1992).

Faculty development

The needs for professional development of faculty in Mexico and the U.S. are quite different, resulting in different types of programs in the two countries.

In Mexico, where only 3 percent of faculty hold doctorate degrees, faculty development is understood primarily as opportunities to obtain advanced degrees.

The federal government is taking the initiative to make these opportunities available; indeed, it has set a goal of doubling the number of Ph.D.s employed in Mexican institutions in the next five years. Federal funds are channeled through the National Association of Universities and Institutions of Higher Education (ANUIES) to a new program called SUPERA (National Program for the Advancement of Academic Personnel). Higher education institutions select candidates among their faculty members to compete for the SUPERA scholarships. SUPERA also gives funds to both public and private institutions to start new graduate programs or to consolidate existing programs. It also provides funds for short-term faculty development programs in academic disciplines and in pedagogy, and for postdoctoral studies. As a result of these programs and of university administrators' efforts to upgrade their faculties, ANUIES recorded a 23 percent increase in faculty with Ph.D.s and a 12 percent increase in faculty with master's degrees in Mexican institutions, between 1992 and 1993 (ANUIES, 1993).

Frequently the stimulus for faculty development in the U.S. comes from the campus level. Faculty development activities might include sabbaticals, research grants and other opportunities for renewing and acquiring new skills, as well as advanced degree programs. A long-established federal government program, the National Science Foundation (NSF), offers many such opportunities to U.S. faculty, although most of its funding is directed to the major research universities. NSF is an excellent example of a federal "investment strategy" to improve the country's scientific capacity while sharpening and renewing faculty skills. Jones and Lovell (in press) warn that without such attention to faculty development, faculty could "depreciate." They argue for increased funding for programs of staff development, sabbaticals and faculty involvement in scholarly activities.

Potential implications of NAFTA

The North American Free Trade Agreement (NAFTA) will have a tremendous impact on the U.S. and Mexico. In addition to the expected advantages to business and industry, higher education is also likely to benefit.

NAFTA encourages the countries to develop mutually acceptable standards and criteria for the certification and licensing of professional educational programs and provides for the mutual recognition of professional licenses and certifications across borders. Educational organizations, professional organizations and official agencies from both countries are working on procedures for mutual recognition of licenses in the fields of architecture, agronomy, accounting, law, medicine,

veterinary medicine, nursing, pharmacology, psychology, engineering and dentistry. The mutual recognition of certifications and licenses and the development of standards for these professions will improve the quality of educational programs. Improvements in the quality of educational programs can serve as an excellent foundation for improving economic conditions of individuals as well as of entire countries.

The Center for Quality Assurance in International Education, headquartered in Washington, D.C., is working with officials in several countries to ensure that NAFTA and other international compacts include educational components as part of the exchange of ideas and free trade. Licensing and certification standards are frequently different, and expectations for professional practice often vary, but these dialogues will enhance the opportunities for quality improvements of the educational programs and the quality of the individual professional.

In the U.S., a requirement for professional licensing is graduation from an accredited academic program, whereas in Mexico, the first steps toward establishing an accreditation system are just now being taken. Mexican professionals acquire a *cédula profesional* which permits them to provide professional services after graduating from a registered program in a degree-granting institution. Standards for accreditation in the two countries will probably differ significantly due to enormous differences in the academic preparation of faculty and the proportion of full-time faculty per student in the two countries. The challenge posed by NAFTA is to arrive at an agreement that permits mutual recognition of licenses and certifications, that facilitates the free exercise of professional services in the two countries and that guarantees high-quality professional services. Faculty and professionals in Mexico are concerned that if differences in the level of development and of accreditation standards in the two countries are not taken into account, Mexican professionals will be at a great disadvantage vis-a-vis U.S. professionals.

Concluding Comments

While at first glance there appear to be great dissimilarities between faculty in the U.S. and Mexico, a closer look reveals that they are facing many similar challenges. Faculty in both countries are being asked to "do more with less," to improve the quality of education and reduce the costs, to make education more accessible to students and more attuned to the needs of industry and society as a whole. They are being asked to redefine their workloads, roles and professional priorities and explore the possibilities offered by new technologies. And increasingly, their compensation is contingent on demonstrated "outputs" in terms of achievements in teaching and/or research.

Given the similarities and the differences between faculties in Mexico and the U.S., both groups have much to give and much to gain through increased opportunities for dialogue. Forums need to be created where faculty from the two countries can discuss issues of mutual interest and define areas for collaboration. Some potential areas for such collaboration are the following:

- **Increase opportunities for faculty exchanges.** Expanded opportunities should be made available equally to U.S. and Mexican faculty. It may be difficult, however, for part-time Mexican faculty to arrange for time away from their multiple workplaces and special consideration should be given to developing exchange opportunities which provide scheduling flexibility and possibly salary support.

- **Develop new models for faculty development.** Other models of faculty enrichment also need to be developed to enable part-time faculty to benefit these models might be conceptually similar to attempts in the U.S. to modify the traditional higher education system to meet the needs of "non-traditional" students.

- **Increase the appropriate use of technology as an educational tool.** Telecommunications and computers offer opportunities for interaction between U.S. and Mexican classrooms, students and faculty. Courses and entire educational programs could be enriched by such interaction. At the same time, such cross-cultural interactions can foster in students a deeper understanding and appreciation for distinct cultures and political, economic and social systems.

- **Develop mutually beneficial relations with the business community.** Faculty in Mexico and the U.S. can work together to respond to the fast-changing business relations brought about by NAFTA and by rapidly developing technologies. In both countries, relations between business and higher education need to be built so that the educational establishment effectively contributes to national economic and social development, without losing its independence.

As new strategies are developed, it will be important to avoid taking a "one size fits all" approach. While some models may be successfully transferred from one country to the other, there must always be flexibility to take into account the two nations' distinct historical and cultural experiences and expectations. Differences between the two countries' policy agendas and strategies for achieving specific goals should be expected and respected. Accepting these differences, faculty on both sides of the border have much to gain from increased opportunities for dialogue and collaboration.

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